

SEARCH REQUEST FORM

Requestor's
Name:Michael Astorino

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3736

Search Topic:

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevant citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevant claim(s).

Inventors:

Jim E. Riviere, Tomás MARTÍN-Jiménez, Ronald E. Brynes
3 Arthur L. Craigmill

FYI:

Including claim 19 and Abstract for STIC Search
Request as an aid to searcher.

Subject:

Finding Residue in Land Based Animals Derivative
Food. Residue levels are also known as tolerance, tolerance levels
or MRL. Residues are created ^{when} ~~from~~ Drugs given to
Animals, ~~and the animal~~ TISSUES (Cells, Muscles, or Organs) ~~with~~
USE up the drugs. THE TIME IT TAKES FOR THE TISSUE TO SIGNIFICANTLY
USE up drugs/compound is the Withdrawal TIME (AKA. Withdrawal
Interval).

* NOTE: P 5 of the BIOSIS FILE, the Applicant/Inventor's
hand.

STAFF USE ONLY

Date completed:

April 7, 1999

Searcher:

T. Saunders

Terminal time:

45 min

Elapsed time:

CPU time:

120 min

Total time:

165

Number of Searches:

2

Number of Databases:

4

Search Site

☒ STIC☐ CM-1☐ Pre-S

Type of Search

☐ N.A. Sequence☐ A.A. Sequence☐ Structure☐ Bibliographic

Vendors

☐ IG☒ STN☐ Dialog☐ APS☐ Geninfo☐ SDC☐ DARC/Questel☐ Other

L14 177978 SEA FILE=MEDLINE ABB=ON PLU=ON SOFTWARE# OR COMPUTER? OR
ARTIFICIAL INTELLIGENCE
L26 896 SEA FILE=BIOSIS ABB=ON PLU=ON DRUG(2A)RESIDUE#
L37 579 SEA FILE=BIOSIS ABB=ON PLU=ON (ANIMAL# OR TISSUE# OR CELL#
OR MUSCLE# OR ORGAN#) AND L26
L38 9 SEA FILE=BIOSIS ABB=ON PLU=ON L14 AND L37

=> d all 1 3 4 5 7 8 9

L38 ANSWER 1 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1998:484877 BIOSIS
DN PREV199800484877
TI Multiresidue supercritical fluid extraction method for the recovery at low
ppb levels of three sulfonamides from fortified chicken liver.
AU Maxwell, Robert J. (1); Lightfield, Alan R.
CS (1) U.S. Dep. Agric., Agric. Res. Serv., Eastern Regional Res. Cent., 600
E. Mermaid Lane, Wyndmoor, PA 19038 USA
SO Journal of Chromatography B, (Sept. 18, 1998) Vol. 715, No. 2, pp.
431-435.
ISSN: 0378-4347.
DT Article
LA English
AB A supercritical fluid extraction (SFE) method is proposed for the recovery
of three sulfonamides from chicken liver. Samples were extracted at 680
bar and 40degreeC using unmodified carbon dioxide and were collected free
of co-extracted artifactual material on an in-line neutral alumina sorbent
bed. High recoveries of sulfamethazine (SMZ), sulfadimethoxine (SDM) and
sulfaquinoxaline (SQX) were obtained from chicken liver samples fortified
at levels from 1000 to 50 ppm.
CC Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
Comparative Biochemistry, General *10010
Biochemical Methods - General *10050
Biochemical Studies - General *10060
Biophysics - General Biophysical Techniques *10504
Biophysics - Molecular Properties and Macromolecules *10506
Metabolism - General Metabolism; Metabolic Pathways *13002
Food Technology - Poultry and Eggs *13520
Digestive System - Physiology and Biochemistry *14004
Pharmacology - General *22002
Toxicology - General; Methods and Experimental *22501
Toxicology - Foods, Food Residues, Additives and Preservatives *22502
Poultry Production - General; Methods *27002
Veterinary Science - General; Methods *38002
Chemotherapy - General; Methods; Metabolism *38502
BC Galliformes 85536
IT Major Concepts
Methods and Techniques
IT Parts, Structures, & Systems of Organisms
liver: digestive system
IT Chemicals & Biochemicals
carbon dioxide; sulfadimethoxine: assay, recovery, quantitative
analysis, pharmaceutical; sulfamethazine: assay, quantitative analysis,
recovery, pharmaceutical; sulfaquinoxaline: assay, pharmaceutical,
recovery, quantitative analysis; sulfonamides: assay, pharmaceutical,
quantitative analysis, recovery; **tissue drug**

residues: analysis
 IT Methods & Equipment
 supercritical liquid extraction: Isolation/Purification Techniques: CB,
 extraction method; H-P Chemstation **software:** Hewlett-Packard,
 computer software: H-P HPLC 1050 series system:
 Hewlett-Packard, equipment; HPLC [high performance liquid
 chromatography]: analytical method, liquid chromatography; Spe-ed SFE
 Model 7010 extractor: Applied Separations, equipment
 ORGN Super Taxa
 Galliformes: Aves, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 chicken (Galliformes)
 ORGN Organism Superterms
 Animals; Birds; Chordates; Nonhuman Vertebrates; Vertebrates
 RN 63-74-1D (SULFONAMIDES)
 57-68-1 (SULFAMETHAZINE)
 122-11-2 (SULFADIMETHOXINE)
 59-40-5 (SULFAQUINOXALINE)
 124-38-9 (CARBON DIOXIDE)

 L38 ANSWER 3 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
 AN 1996:417619 BIOSIS
 DN PREV199699139975
 TI Ketoprofen concentrations in plasma and milk after intravenous
 administration in dairy cattle.
 AU Degraives, F. J.; Riddell, M. G.; Schumacher, J.
 CS Dep. Large Animal Surgery Med., Coll. Veterinary Med., Auburn Univ., 133
 McAdory Hall, Auburn, AL 36849-5522 USA
 SO American Journal of Veterinary Research, (1996) Vol. 57, No. 7, pp.
 1031-1033.
 ISSN: 0002-9645.
 DT Article
 LA English
 AB Objective-To determine plasma and milk concentration-time profiles and
 pharmacokinetic variables after IV administration of ketoprofen to
 lactating dairy cows. Design-Cows received a single IV bolus of ketoprofen
 (3.31 mg/kg of body weight). Blood and milk were collected at 0, 5, 10,
 15, 25, 40, 60, 90, 120, 180, 240, 360, and 480 minutes. Ketoprofen
 concentrations in plasma and milk were determined. **Animals-6**
 clinically normal lactating Holstein cows. Procedure-Plasma and milk
 samples were processed by solvent extraction, and ketoprofen
 concentrations were determined, using high-performance liquid
 chromatography with octadecyl silane reverse-phase guard and analytic
 columns. A **computer** polyexponential curve-stripping program was
 used to fit ketoprofen concentration-time data and to calculate
 pharmacokinetic variables. Results-The lower limit of detection for
 ketoprofen in plasma was 18 ng/ml; the lower limit of quantification was
 60 ng/ml. The lower limit of detection for ketoprofen in milk was 27
 ng/ml; the lower limit of quantification was 90 ng/ml. Plasma ketoprofen
 concentration-time curves best fit an open two-compartment pharmacokinetic
 model. Harmonic mean apparent volume of distribution at steady state was
 0.11 (range, 0.095 to 0.13) L/kg, elimination half-life was 0.49 (range,
 0.40 to 0.67) hour, and total clearance was 0.1 (range, 0.14 to 0.19)
 L/kg/h. Ketoprofen was detected in some milk samples, 10 to 120 minutes
 after administration, but all concentrations were below the limit of
 quantification. Adverse effects were not observed in cows given
 ketoprofen. Conclusions-The elimination half-life for ketoprofen is short,
 and low concentrations of ketoprofen can be detected in normal milk, after
 IV treatment of cattle with ketoprofen. Milk and meat from cattle treated
 IV with ketoprofen should not be an important **drug**
 residue risk if appropriate withholding periods are used.
 CC Biochemical Studies - General *10060
 Metabolism - General Metabolism; Metabolic Pathways *13002
 Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies

*15002
 Reproductive System - Physiology and Biochemistry *16504
 Pharmacology - Cardiovascular System *22010
 Veterinary Science - General; Methods *38002
 BC Bovidae *85715
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Metabolism; Pharmacology; Reproductive System (Reproduction); Veterinary Medicine (Medical Sciences)
 IT Chemicals & Biochemicals
 KETOPROFEN
 IT Miscellaneous Descriptors
 ANTIINFLAMMATORY-DRUG; KETOPROFEN; PHARMACOKINETICS
 ORGN Super Taxa
 Bovidae: Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia
 ORGN Organism Name
 Bovidae (Bovidae)
 ORGN Organism Superterms
 animals; artiodactyls; chordates; mammals; nonhuman vertebrates; nonhuman mammals; vertebrates
 RN 22071-15-4 (KETOPROFEN)

L38 ANSWER 4 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
 AN 1995:419108 BIOSIS
 DN PREV199598433408
 TI Comparative plasma and **tissue** pharmacokinetics and **drug residue** profiles of different chemotherapeutants in fowls and rabbits.
 AU Li, T.; Qiao, G. L. (1); Hu, G. Z.; Meng, F. D.; Qiu, Y. S.; Zhang, X. Y.; Guo, W. X.; Yie, H. L.; Li, S. F.; Li, S. Y.
 CS (1) Cutaneous Pharmacology Toxicology Cent., Coll. Veterinary Med., Box 8401, North Carolina State Univ., Raleigh, NC 27606 USA
 SO Journal of Veterinary Pharmacology and Therapeutics, (1995) Vol. 18, No. 4, pp. 260-273.
 ISSN: 0140-7783.
 DT Article
 LA English
 AB Blood and **tissue** pharmacokinetics and **drug residue** profiles of six chemotherapeutants were studied. Ceftriaxone (CEF), intravenously at 50 mg/kg, sulfamonomethoxine (SMM) and sulfaquinoxaline (SQ), orally at 200 mg/kg, and olaquinox (OLA), orally at 50 mg/kg, were administered to young broilers. Penicillin (PEN), intramuscularly at 200 000 U/kg, and albendazole (ALB), orally at 20 mg/kg, were given to rabbits. For each drug, 13-18 groups (n = 5-10 individuals/group) of the dosed **animals** were killed at different post-dosing times. Drug and/or metabolite concentrations in plasma, liver, kidney, heart, lung, and **muscle tissues** were analysed by HPLC procedures. Multi-exponential kinetic models were fitted to the observed **tissue** concentration-time data by applying a non-linear least-squares regression **computer** program. **Tissue** half-life, peak **tissue** concentration, and time of peak **tissue** concentration were determined. Half-life of CEF, SMM, SQ, OLA, PEN, ALB, and two metabolites of ALB (sulfoxide and sulfone) in various **tissues** ranged 0.6-1.4, 4.7-9.0, 4.5-18.9, 1.8-3.1, 0.9-3.0, 3.4-9.6, 5.0-16.1 and 7.4-12.2 h. The times required for CEF, SMM, SQ, OLA, PEN, and ALB residue concentrations to decline to 0.1 μ -g/g in various **tissues** ranged from 5.0-11.6, 70.0-110.5, 114.0-179.8, 21.3-30.3, 4.1-24.8 and 47.8-84.4 h. Drug kinetic characteristics in **tissues** differed significantly from those in plasma, and also varied from **tissue** to **tissue**. It is necessary, therefore, to evaluate **tissue** kinetics when designing dosage regimens in **tissue** infection chemotherapy with these drugs. Knowledge of **tissue** kinetics is also important in predicting and controlling **drug residues** in edible

tissues of food-producing animals.

CC Cytology and Cytochemistry - Animal *02506
 Biochemical Studies - General *10060
 Physiology, General and Miscellaneous - Comparative *12003
 Pathology, General and Miscellaneous - Therapy *12512
 Metabolism - General Metabolism; Metabolic Pathways *13002
 Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
 Pharmacology - General *22002
 Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
 Toxicology - Pharmacological Toxicology *22504

BC Aves - Unspecified 85500
 Leporidae *86040

IT Major Concepts
 Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Cell Biology; Metabolism; Pathology; Pharmacology; Physiology; Toxicology

IT Chemicals & Biochemicals
 CEFTRIAXONE; SULFAMONOMETHOXINE; SULFAQUINOXALINE; OLAQUINDOX; PENICILLIN; ALBENDAZOLE

IT Miscellaneous Descriptors
 ALBENDAZOLE; ANTIBACTERIAL-DRUG; ANTIHELMINTHIC-DRUG; ANTIINFECTIVE-DRUG; ANTIPARASITIC-DRUG; CEFTRIAXONE; METABOLIC-DRUG; OLAQUINDOX; PENICILLIN; SULFAMONOMETHOXINE; SULFAQUINOXALINE

ORGN Super Taxa
 Aves - Unspecified: Aves, Vertebrata, Chordata, Animalia; Leporidae: Lagomorpha, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 Aves (Aves - Unspecified); Leporidae (Leporidae)

ORGN Organism Superterms
 animals; birds; chordates; lagomorphs; mammals; nonhuman mammals; nonhuman vertebrates; vertebrates

RN 73384-59-5 (CEFTRIAXONE)
 1220-83-3 (SULFAMONOMETHOXINE)
 59-40-5 (SULFAQUINOXALINE)
 23696-28-8 (OLAQUINDOX)
 1406-05-9 (PENICILLIN)
 54965-21-8 (ALBENDAZOLE)

L38 ANSWER 5 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS

AN 1994:37096 BIOSIS

DN PREV199497050096

TI Structure-function relationship studies in human cholinesterases reveal genomic origins for individual variations in cholinergic drug responses.

AU Loewenstein, Yael; Gnatt, Averell; Neville, Lewis F.; Zakut, Haim (1); Soreq, Hermona

CS (1) Dep. Obstet. and Gynecol., Edith Wolfson Med. Cent., Sackler Fac. Med., Tel-Aviv Univ., P.O. Box 5, Holon 58100 Israel

SO Progress in Neuro-Psychopharmacology & Biological Psychiatry, (1993) Vol. 17, No. 6, pp. 905-926.
 ISSN: 0278-5846.

DT Article

LA English

AB 1. Due to their involvement in the termination of neurotransmission at cholinergic synapses and neuromuscular junctions, cholinesterases are the target proteins for numerous drugs of neuro-psychopharmacology importance. 2. In order to perform structure-function relationship studies on human cholinesterases with respect to such drugs, a set of expression vectors was engineered, all of which include cloned cDNA inserts encoding various forms of human acetyl- and butyrylcholinesterase. These vectors were designed to be transcribed in vitro into their corresponding mRNA products which, when microinjected into Xenopus oocytes, are efficiently translated to yield their catalytically active enzymes, each with its distinct substrate specificity and sensitivity to selective inhibitors. 3. A fully

automated microtiter plate assay for evaluating the inhibition of said
 enzymes by tested cholinergic drugs and/or poisons has been developed, in
 conjunction with **computerized** data analysis, which offers
 prediction of such inhibition data on the authentic human enzymes and
 their natural or mutagenized variants. 4. Thus, it was found that asp70
 fwdarw gly substitution renders butyrylcholinesterase succinylcholine
 insensitive and resistant to oxime reactivation while ser 425 fwdarw Pro
 with gly70 gives rise to the "atypical" butyrylcholinesterase phenotype,
 abolishing dibucaine binding. 5. Furthermore, differences in
 cholinesterase affinities to physostigmine, ecothiophate and bambuterol
 were shown in these natural variants. 6. Definition of key
residues important for **drug** interactions may initiate
 rational design of more specific cholinesterase inhibitors, with fewer
 side effects. This, in turn, offers therapeutic potential in the treatment
 of clinical syndromes such as Alzheimer's and Parkinson's disease,
 glaucoma and myasthenia gravis.

CC Genetics and Cytogenetics - Human *03508
 Biochemical Studies - General 10060
 Biophysics - Molecular Properties and Macromolecules 10506
 Enzymes - Physiological Studies *10808
 Endocrine System - Neuroendocrinology *17020
 Nervous System - Physiology and Biochemistry *20504
 Pharmacology - Clinical Pharmacology *22005
 Pharmacology - Neuropharmacology *22024

BC Hominidae *86215

IT Major Concepts
 Endocrine System (Chemical Coordination and Homeostasis); Enzymology
 (Biochemistry and Molecular Biophysics); Genetics; Nervous System
 (Neural Coordination); Pharmacology

IT Chemicals & Biochemicals
 CHOLINESTERASES; ACETYLCHOLINESTERASE; BUTYRYLCHOLINESTERASE

IT Miscellaneous Descriptors
 ACETYLCHOLINESTERASE; BUTYRYLCHOLINESTERASE; PHARMACOLOGY

ORGN Super Taxa
 Hominidae: Primates, Mammalia, Vertebrata, Chordata, Animalia

ORGN Organism Name
 Hominidae (Hominidae)

ORGN Organism Superterms
animals; chordates; humans; mammals; primates; vertebrates

RN 9001-08-5D (CHOLINESTERASES)
 9000-81-1 (ACETYLCHOLINESTERASE)
 9001-08-5 (BUTYRYLCHOLINESTERASE)

L38 ANSWER 7 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
 AN 1989:128427 BIOSIS
 DN BA87:63080
 TI PHARMACOKINETIC ESTIMATION FOR THERAPEUTIC DOSAGE REGIMENS PETDR A
SOFTWARE PROGRAM DESIGNED TO DETERMINE INTRAVENOUS DRUG DOSAGE
 REGIMENS FOR VETERINARY APPLICATIONS.

AU RIVIERE J E; FRAZIER D L; TIPPITT W L
 CS LAB. TOXICOKINETICS, COLL. VET. MED., N.C. STATE UNIV., 4700 HILLSBOROUGH
 ST., RALEIGH, N.C. 27606, USA.

SO J VET PHARMACOL THER, (1988) 11 (4), 390-396.
 CODEN: JVPTD9. ISSN: 0140-7783.

FS BA; OLD
 LA English

AB Pharmacokinetic estimation for therapeutic dosage regimens (PETDR) is a
software program used to design individualized intravenous dosage
 regimens, determine concentration-time profiles, predict serum
 concentrations at a specific time after intravenous dosing and predict the
 time after the last dose to achieve a specified concentration of drug. The
 reference pharmacokinetic parameters may be based on an individual
animal's pharmacokinetic disposition of drug or on FARAD (Food
Animal Residue Avoidance Databank) mean population kinetic

parameters. An individual **animal**'s kinetic parameters may be input for predetermined analysis or the program can calculate these values by input of raw serum concentration-time data. The program allows the user to specify certain parameters of the dosage regimen, then calculates the other parameters (given desired maximum and minimum serum concentrations, dose and interval are calculated; given desired maximum serum concentration and interval, dose is calculated, etc.). Given the kinetic parameters, the dose and dosing interval, the program calculates and plots the serum concentration-time profile of the drug for that **animal**. The time and the number of doses to reach steady state can be calculated as well as the determination of loading dose. The percentage of the time of a dosing interval at steady state that the serum concentration is above a specific minimum inhibitory concentration (MIC) allows evaluations of efficacy of an antimicrobial regimen. Similarly, the time to reach a specific concentration (e.g. residue tolerance) or the MIC of a drug can be calculated. Legal **tissue** tolerances can be accessed from FARAD to aid in predicting for what period of time illegal residues will remain in the **animal**. These calculations allow design of dosage regimens that maximize therapeutic efficacy and minimize toxicity to the patient as well as to decrease the incidence of **drug residues** in food **animals**.

CC General Biology - Information, Documentation, Retrieval and Computer Applications *00530
 Biochemical Studies - General 10060
 Pathology, General and Miscellaneous - Therapy *12512
 Metabolism - General Metabolism; Metabolic Pathways *13002
 Blood, Blood-Forming Organs and Body Fluids - Blood and Lymph Studies *15002
 Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
 Veterinary Science - General; Methods *38002
 BC Animalia - Unspecified 33000
 IT Miscellaneous Descriptors
ANIMAL THERAPEUTIC EFFICACY MAXIMIZATION SOFTWARE PROGRAM

L38 ANSWER 8 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
 AN 1987:13597 BIOSIS
 DN BR32:3730
 TI FOOD **ANIMAL** RESIDUE AVOIDANCE DATA-BANK AN AUTOMATED PHARMACOLOGIC DATA-BANK FOR **DRUG** AND CHEMICAL **RESIDUE** AVOIDANCE.
 AU RIVIERE J E; CRAIGMILL A L; SUNDLOF S F
 CS LAB. TOXICOKINETICS, SCH. VET. MED., NORTH CAROLINA STATE UNIV., RALEIGH, N.C. 27606.
 SO J. Food Prot., (1986) 49 (10), 826-830.
 CODEN: JFPRDR. ISSN: 0362-028X.
 FS BR; OLD
 LA English
 CC General Biology - Information, Documentation, Retrieval and Computer Applications *00530
 Biochemical Studies - General 10060
 Metabolism - General Metabolism; Metabolic Pathways 13002
 Food Technology - General; Methods *13502
 Food Technology - Meats and Meat By - Products 13516
 Food Technology - Dairy Products 13518
 Food Technology - Evaluations of Physical and Chemical Properties 13530
 Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
 Toxicology - Foods, Food Residues, Additives and Preservatives *22502
 Toxicology - Pharmacological Toxicology *22504
 Toxicology - Veterinary Toxicology *22508
 Animal Production - General; Methods *26502
 Veterinary Science - General; Methods 38002
 IT Miscellaneous Descriptors
FOOD RESIDUE MILK PHARMACOKINETICS COMPUTERS

' L38 'ANSWER 9 OF 9 BIOSIS COPYRIGHT 1999 BIOSIS
 .AN 1986:64927 BIOSIS
 DN BR30:64927
 TI **COMPUTERIZED FOOD-ANIMAL RESIDUE-AVOIDANCE DATA-BANK**
 FOR VETERINARIANS.
 AU SUNDLOF S F; RIVIERE J E; CRAIGMILL A L; BUCK W B
 CS DEP. PHYSIOL. SCI., COLL. VET. MED., UNIV. FLA., GAINESVILLE, FLA. 32610.
 SO J. Am. Vet. Med. Assoc., (1986) 188 (1), 73-76.
 CODEN: JAVMA4. ISSN: 0003-1488.
 FS BR; OLD
 LA English
 CC General Biology - Institutions, Administration and Legislation 00508
 General Biology - Information, Documentation, Retrieval and Computer
 Applications *00530
 Mathematical Biology and Statistical Methods *04500
 Biochemical Studies - General 10060
 Food Technology - Meats and Meat By - Products *13516
 Food Technology - Dairy Products *13518
 Food Technology - Poultry and Eggs *13520
 Pharmacology - Drug Metabolism; Metabolic Stimulators *22003
 Toxicology - Foods, Food Residues, Additives and Preservatives *22502
 Toxicology - Pharmacological Toxicology *22504
 IT Miscellaneous Descriptors
 LIVESTOCK MEAT MILK EGG **DRUG RESIDUE** USA DEPARTMENT
 OF AGRICULTURE

=> D QUE

L5 121229 SEA FILE=MEDLINE ABB=ON PLU=ON RESIDUE#
 L18 1080 SEA FILE=MEDLINE ABB=ON PLU=ON "DRUG RESIDUES"/CT
 L42 6204 SEA FILE=MEDLINE ABB=ON PLU=ON L1.700.568.110.85+NT/CT
 L43 997009 SEA FILE=MEDLINE ABB=ON PLU=ON ANALYSIS/CT
 L44 121229 SEA FILE=MEDLINE ABB=ON PLU=ON L18 OR L5
 L45 40 SEA FILE=MEDLINE ABB=ON PLU=ON L42 AND L44
 L46 9 SEA FILE=MEDLINE ABB=ON PLU=ON L45 AND L43

=> D 4 7 8 9 ALL

L46 ANSWER 4 OF 9 MEDLINE
 AN 91210394 MEDLINE
 DN 91210394
 TI Post-column continuous-flow analysis combined with reversed-phase liquid chromatography and computer-aided detection for the characterisation of peptides.
 AU Fell A F; Castledine J B; Sellberg B; Modin R; Weinberger R
 CS Department of Pharmaceutical Chemistry, School of Pharmacy, University of Bradford, U.K..
 SO JOURNAL OF CHROMATOGRAPHY, (1990 Dec 28) 535 (1-2) 33-9.
 Journal code: HQF. ISSN: 0021-9673.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 199108
 AB Peptide mapping is a key technique for structural identification of new proteins or the products of recombinant gene technology. The recognition of oligopeptides, separated by reversed-phase liquid chromatography, is limited by the conventional reliance on the correlation of retention times with standards, supported by dual-wavelength chromatograms. It has been reported that the recognition of phenolic compounds can be achieved by a novel technique, based on computer-aided photodiode-array detection of the pH-shifted solutes after post-column continuous-flow analysis. This work describes how the generation of the pH-shifted difference spectra for dipeptides, containing a tyrosyl **residue**, may be used to enhance peak recognition, when used in conjunction with absorbance ratios.
 CT Check Tags: Support, Non-U.S. Gov't
 Absorptiometry, Photon
Amino Acids: AN, analysis
***Automatic Data Processing: MT, methods**
 *Chromatography, Liquid: MT, methods
 Hydrogen-Ion Concentration
 *Peptides: CH, chemistry
 CN 0 (Amino Acids); 0 (Peptides)

L46 ANSWER 7 OF 9 MEDLINE
 AN 86181787 MEDLINE
 DN 86181787
 TI [Unified system of public health control over the residual amount of pesticides in food products using automated data processing].
 Unifitsirovannaia sistema sanitarno-gigienicheskogo kontrolya za

ostatochnymi kolichestvami pestitsidov v produktakh pitaniia s
 avtomatizirovannoi obrabotkoi dannyykh.
 .AU Selivanova L V
 SO VOPROSY PITANIYA, (1986 Jan-Feb) (1) 74-8.
 Journal code: XK4. ISSN: 0042-8833.
 CY USSR
 DT Journal; Article; (JOURNAL ARTICLE)
 LA Russian
 FS Priority Journals
 EM 198607
 CT Check Tags: Comparative Study
 *Automatic Data Processing
 *Food Analysis
 *Pesticide Residues: AN, analysis
 *Public Health
 USSR
 CN 0 (Pesticide Residues)

 L46 ANSWER 8 OF 9 MEDLINE
 AN 77105401 MEDLINE
 DN 77105401
 TI The effect of storage at 4 degrees C on antibiotic **residues** in
 kidney and meat tissues of dairy cows.
 AU Nouws J F; Ziv G
 SO TIJDSCHRIFT VOOR DIERGENEESKUNDE, (1976 Oct 15) 101 (20) 1145-53.
 Journal code: VRY. ISSN: 0040-7453.
 CY Netherlands
 DT Journal; Article; (JOURNAL ARTICLE)
 LA English
 FS Priority Journals
 EM 197705
 AB A method is described for the quantitative assay of antibiotic
residues in the body of slaughtered farm animals by means of 3
 types of agar media and 3 test organisms. With the help of programmed
 calculation procedures, data from large-scale tests for antibiotic
residues could be analyzed accurately and rapidly. The
 concentrations of penicillin G, ampicillin, amoxycillin, cloxacillin,
 cephalosporins, cephradine, neomycin, kanamycin, and oxytetracycline in the
 kidney, and also of tylosin in meat from the diaphragm muscle of cattle
 treated parenterally with these antibiotics were measured periodically in
 samples kept at 4 degrees C for up to 7 days after slaughter. The
 concentrations of penicillin G, ampicillin, amoxycillin and the
 cephalosporins in the kidney decreased rapidly upon storage whereas the
 levels of the other antibiotics remained essentially unchanged. Antibiotic
 stability in the meat was considerably greater than in the kidney upon
 storage for 4 days, and neomycin meat tissue levels were not reduced
 during storage for up to 144 hours. Results are discussed in relation to
 the conduct of the official qualitative Sarcina lutea Kidney Test and the
 most desirable procedure for preparing meat samples for assay.
 CT Check Tags: Animal; Female
 *Antibiotics: AN, analysis
 Automatic Data Processing
 Biological Assay
 Cattle
 Cold
 *Food Preservation
 *Kidney: AN, analysis
 Mathematics
 *Meat: AN, analysis

 L46 ANSWER 9 OF 9 MEDLINE
 AN 75211654 MEDLINE
 DN 75211654
 TI Systems for automated multiple pesticide **residue** analysis.

AU McLeod H A
SO JOURNAL OF CHROMATOGRAPHIC SCIENCE, (1975 Jul) 13 (7) 302-7.
Journal code: HQM. ISSN: 0021-9665.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197512
AB This article reviews the development and current status of automated multiple pesticide **residue** analysis. Various configurations of equipment that perform specific steps in a method of analysis are described. These include the use of Technicon modules, automatic injectors for gas chromatography, specially designed units and data processing systems.
CT *Autoanalysis: MT, methods
Automatic Data Processing
Chromatography
Computers
*Pesticide Residues: AN, analysis
Pesticides: AN, analysis

L23 ANSWER 1 OF 1 MEDLINE
AN 97043339 MEDLINE
DN 97043339
TI Concentration-time profiles of oxytetracycline in blood, kidney and liver of tench (*Tinca tinca* L) after intramuscular administration.
AU Reja A; Moreno L; Serrano J M; Santiago D; Soler F
CS Universidad de Cordoba, Dpto de Farmacologia Y Toxicologia, Spain.
SO VETERINARY AND HUMAN TOXICOLOGY, (1996 Oct) 38 (5) 344-7.
Journal code: XBV. ISSN: 0145-6296.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199703
AB Oxytetracycline (OTC) is a widely-used antibiotic in several animal species. The Food and Drug Administration allows OTC to be used in fish intended for human food, but there is limited kinetics data available. We studied OTC concentrations in plasma, kidney and liver in tenches (*Tinca tinca* L) after im administration using HPLC. Concentrations were fit to a monocompartment open model by extended least squares regression analysis using the MULTI (ELS) **computer** program. Peaks of OTC concentrations (Cmax) occurred at 4 h for blood and kidney and 72 h for liver and were 134.1 micrograms/mL, 129.8 micrograms/g and 333.4 micrograms/g, respectively. There was a high correlation ($r = 0.9448$) between blood and kidney concentrations and less between blood and liver. Concentrations were statistically different for each system. The blood OTC concentrations were higher than renal concentrations 92% of the time and were higher than hepatic concentrations 29% of the time. The plasma OTC half-life (21.2 h) was longer than in homeothermic species. The tench liver maintains considerable OTC **residues** and may affect food products derived from that organ.
CT Check Tags: Animal
Antibiotics, Tetracycline: AD, administration & dosage
Antibiotics, Tetracycline: BL, blood
Antibiotics, Tetracycline: ME, metabolism
*Antibiotics, Tetracycline: PK, pharmacokinetics
Chromatography, High Pressure Liquid
Drug Residues: AN, analysis
Fishes
Half-Life
Injections, Intramuscular
*Kidney: ME, metabolism
*Liver: ME, metabolism
Oxytetracycline: AD, administration & dosage
Oxytetracycline: BL, blood
Oxytetracycline: ME, metabolism
*Oxytetracycline: PK, pharmacokinetics
Regression Analysis
Software
Tissue Distribution
RN 79-57-2 (Oxytetracycline)
CN 0 (Antibiotics, Tetracycline)

=> d que

L1	(	121229)	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	RESIDUE#
L2	(	1080)	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	"DRUG RESIDUES"/CT
L4	(	997009)	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	ANALYSIS/CT
L5	(	121229)	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L2 OR L1
L9		23784	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	HALF-LIFE/CT
L14		177978	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	SOFTWARE# OR COMPUTER? OR
							ARTIFICIAL INTELLIGENCE
L20		378	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L9 AND L5
L21		130	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L4 AND L20
L23		1	SEA	FILE=MEDLINE	ABB=ON	PLU=ON	L14 AND L21

FILE 'CAPLUS' ENTERED AT 11:53:01 ON 07 APR 1999

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303018 DRUG
181933 DRUGS
397224 DRUG
(DRUG OR DRUGS)
339255 RESIDUE#
L39 746 DRUG(2A)RESIDUE#

=> s (animal# or tissue# or cell# or muscle# or organ#) and 139

863066 ANIMAL#
481828 TISSUE#
1535017 CELL#
195463 MUSCLE#
131276 ORGAN#
520784 ORG
9646 ORGS
524003 ORG
(ORG OR ORGS)
650621 ORGAN#
(ORGAN# OR ORG)

L40 433 (ANIMAL# OR TISSUE# OR CELL# OR MUSCLE# OR ORGAN#) AND L39

=> s 114 and 140

17901 SOFTWARE#
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60764 ARTIFICIAL
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(ARTIFICIAL OR ARTIFICIALS)
1659 INTELLIGENCE
4 INTELLIGENCES
1661 INTELLIGENCE
(INTELLIGENCE OR INTELLIGENCES)
998 ARTIFICIAL INTELLIGENCE
(ARTIFICIAL(W) INTELLIGENCE)

L41 2 L14 AND L40

=> d scan

L41 2 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 1-1 (Pharmacology)
TI Purification and analysis of **drug residues** in urine
samples by on-line immunoaffinity chromatography/high-performance liquid
chromatography/continuous-flow fast-atom-bombardment mass spectrometry
ST diethylstilbestrol purifn analysis urine; chromatog mass spectrometry
diethylstilbestrol urine; immunoaffinity chromatog mass spectrometry
diethylstilbestrol; HPLC mass spectrometry diethylstilbestrol urine
IT Urine analysis
(diethylstilbesterol detn. in, of **animals** by online
immunoaffinity chromatog./HPLC/continuous-flow fast-atom-bombardment

mass spectrometry)
IT **Computer** application
· (in diethylstilbestrol anal. in urine of **animals**)
IT 56-53-1P
RL: PREP (Preparation)
(purifn. and anal. of, in urine of **animals**)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L41 2 ANSWERS CAPLUS COPYRIGHT 1999 ACS

CC 1-2 (Pharmacology)

Section cross-reference(s): 17

TI Comparative plasma and **tissue** pharmacokinetics and **drug**
residue profiles of different chemotherapeutics in fowls and
rabbits

ST drug pharmacokinetics blood **tissue** chicken rabbit

IT Blood plasma

Chicken

Heart

Kidney

Liver

Lung

Muscle

Rabbit

(drug pharmacokinetics in blood plasma and **tissue** and
drug residues in fowls and rabbits)

IT 59-40-5, Sulfaquinolaxine 61-33-6, biological studies 1220-83-3,
Sulfamonomethoxine 23696-28-8, Olaquinox 54965-21-8, Albendazole
73384-59-5, Ceftriaxone

RL: BOC (Biological occurrence); BPR (Biological process); BIOL

(Biological study); OCCU (Occurrence); PROC (Process)

(drug pharmacokinetics in blood plasma and **tissue** and
drug residues in fowls and rabbits)

IT 54029-12-8, Albendazole sulfoxide 75184-71-3, Albendazole sulfone

RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation,
nonpreparative)

(drug pharmacokinetics in blood plasma and **tissue** and
drug residues in fowls and rabbits)

ALL ANSWERS HAVE BEEN SCANNED

L46 3 (EDIBL? OR EAT? OR FOOD# OR MEAT# OR LIVESTOCK OR POULTRY OR
EGG#) AND L45

=> d scan

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 8-1 (Radiation Biochemistry)
Section cross-reference(s): 17
TI Optimization models for radiation protection in the case of **animal**
feed-milk **food** chain
ST radiation contamination milk **food** chain model
IT **Computer** program
Dosimetry
Environmental analysis
Feed
Food chain
Milk analysis
Nuclear reactor accident
Optimization
Physicochemical simulation
(optimization models for radiation protection in case of **animal**
feed-milk **food** chain)
IT Radionuclides
RL: ANT (Analyte); ANST (Analytical study)
(optimization models for radiation protection in case of **animal**
feed-milk **food** chain)
IT 10043-66-0, Iodine-131, analysis 10045-97-3, Cesium-137, analysis
RL: ANT (Analyte); ANST (Analytical study)
(optimization models for radiation protection in case of **animal**
feed-milk **food** chain)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS
CC 1-2 (Pharmacology)
Section cross-reference(s): 17
TI Comparative plasma and **tissue** pharmacokinetics and drug
residue profiles of different chemotherapeutics in fowls and
rabbits
ST drug pharmacokinetics blood **tissue** chicken rabbit
IT Blood plasma
Chicken
Heart
Kidney
Liver
Lung
Muscle
Rabbit
(drug pharmacokinetics in blood plasma and **tissue** and drug
residues in fowls and rabbits)
IT 59-40-5, Sulfaquinoxaline 61-33-6, biological studies 1220-83-3,
Sulfamonomethoxine 23696-28-8, Olaquinox 54965-21-8, Albendazole
73384-59-5, Ceftriaxone
RL: BOC (Biological occurrence); BPR (Biological process); BIOL

(Biological study); OCCU (Occurrence); PROC (Process)
 (drug pharmacokinetics in blood plasma and **tissue** and drug
 • **residues** in fowls and rabbits)

IT 54029-12-8, Albendazole sulfoxide 75184-71-3, Albendazole sulfone
 RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation,
 nonpreparative)
 (drug pharmacokinetics in blood plasma and **tissue** and drug
residues in fowls and rabbits)

L46 3 ANSWERS CAPLUS COPYRIGHT 1999 ACS

CC 1-2 (Pharmacology)

TI Concentration-time profiles of oxytetracycline in blood, kidney and liver
 of tench (*Tinca tinca* L.) after intramuscular administration

ST tench oxytetracycline metab blood kidney liver; Tinca oxytetracycline
 metab blood kidney liver

IT Blood plasma
 Kidney
 Liver
 Tench
 (oxytetracycline in blood, kidney and liver of tench after i.m.
 administration)

IT 79-57-2, Oxytetracycline
 RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
 (oxytetracycline in blood, kidney and liver of tench after i.m.
 administration)

=> d que

L14 177978 SEA FILE=MEDLINE ABB=ON PLU=ON SOFTWARE# OR COMPUTER? OR
ARTIFICIAL INTELLIGENCE
L42 58294 SEA FILE=CAPLUS ABB=ON PLU=ON (HALF(1A)LI?) OR (TOLERANCE#(1A
)CONCENTRAT?)
L43 19814 SEA FILE=CAPLUS ABB=ON PLU=ON (ANIMAL# OR TISSUE# OR CELL#
OR MUSCLE# OR ORGAN#) AND L42
L44 183 SEA FILE=CAPLUS ABB=ON PLU=ON L43 AND L14
L45 61 SEA FILE=CAPLUS ABB=ON PLU=ON (RESIDUE# OR MRL OR TOLERANC?
OR LEVEL#) AND L44
L48 24 SEA FILE=CAPLUS ABB=ON PLU=ON (ANALYS? OR EXTRACT?) AND L45

=> D L48 ALL 3 7 15 16 19

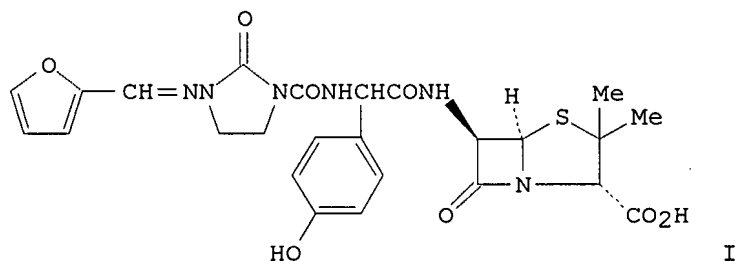
L48 ANSWER 3 OF 24 CAPLUS COPYRIGHT 1999 ACS
 AN 1998:411852 CAPLUS
 DN 129:174998
 TI Fate and behavior of triasulfuron, metsulfuron-methyl, and chlorsulfuron
 in the Australian soil environment: a review
 AU Sarmah, Ajit K.; Kookana, Rai S.; Alston, A. M.
 CS Cooperative Research Centre for Soil and Land Management, Glen Osmond, SA
 5064, Australia
 SO Aust. J. Agric. Res. (1998), 49(5), 775-790
 CODEN: AJAEA9; ISSN: 0004-9409
 PB CSIRO Publishing
 DT Journal; General Review
 LA English
 CC 19-0 (Fertilizers, Soils, and Plant Nutrition)
 Section cross-reference(s): 5
 AB A review with many refs. on the fate and behavior of the title herbicides
 in soils, with particular ref. to alk. soils of Australia. Low
 application rates of sulfonylurea herbicides continue to present an
anal. challenge, although in recent years a no. of new methods
 capable of detecting them at very low concns. have been developed. A
 range of **anal.** methods is available, including high HPLC, gas
 chromatog., immunoassay, and bioassay. However, **anal.**
 sensitivity required to detect trace **levels** of these herbicides
 continues to pose problems in routine detection of herbicide
residues in soils. The review reveals that there are no reports
 of studies of the behavior of sulfonylureas in soils with pH >8.2. This
 is of particular significance to Australian conditions, because a no. of
 Australian soils are even more alk., and the pH (water) in subsoils can be
 as high as 10.2. Sorption of sulfonylureas is pH-dependent and has a
 strong neg. correlation with pH. At pH >8.0, sorption is very low. In
 acid soils, however, sorption of chlorsulfuron, metsulfuron-Me, and
 triasulfuron is strongly influenced by the soil temp., clay content, and,
 particularly, **org.** matter content. The principal modes of
 degrdn. of the herbicides are acid hydrolysis and microbial degrdn., with
 the latter being the only major pathway in alk. soils. Hydrolysis of the
 sulfonylureas is more rapid under acidic conditions (pH 4-7), and
 hydrolysis is likely to be very slow in alk. soils. Data from other
 countries suggest that the **half-life** of chlorsulfuron
 increases exponentially with pH, and that it is also influenced by
 variations in the temp. and water content of the soil. Being acidic, the
 herbicide mols. become anionic at high pH and can move to a considerable
 depth in the soil profile by leaching. Movement of the sulfonylureas in
 soil is largely influenced by **org.** matter content and soil pH
 and sulfonylureas have substantial leaching potential in the sandy alk.
 soils of Australia. This is likely to result in increased persistence in
 alk. subsoils lacking in **org.** matter and biol. activity.
Computer models to predict the persistence and movement of the
 sulfonylureas are available; however, addnl. input parameters are required
 to predict accurately the behavior of specific herbicides in alk. soils
 under Australian conditions. Since new herbicides with chem. similar to
 existing sulfonylureas are increasingly likely to be available for use,
 there is a need to develop comprehensive understanding of their fate,
 behavior, and impact on Australian cropping and ecol. systems.

ST sulfonylurea herbicide soil pollution review
 IT Herbicides
 Soil pollution
 (fate and behavior of sulfonylurea herbicides in soil)
 IT 64902-72-3, Chlorsulfuron 74223-64-6, Metsulfuron-methyl 82097-50-5,
 Triasulfuron
 RL: POL (Pollutant); OCCU (Occurrence)
 (fate and behavior of sulfonylurea herbicides in soil)

L48 ANSWER 7 OF 24 CAPLUS COPYRIGHT 1999 ACS
 AN 1994:693548 CAPLUS
 DN 121:293548
 TI Kinetics of prostacyclin synthesis in PGHS-1-overexpressed endothelial
cells
 AU Sanduja, S. K.; Tsai, A.-L.; Matijevic-Aleksic, N.; Wu, K. K.
 CS Dep. Internal Med., Univ. Texas, Houston, TX, 77030, USA
 SO Am. J. Physiol. (1994), 267(5, Pt. 1), C1459-C1466
 CODEN: AJPHAP; ISSN: 0002-9513
 DT Journal
 LA English
 CC 2-9 (Mammalian Hormones)
 Section cross-reference(s): 7
 AB The availability of a human endothelial **cell** overexpressed with
 prostaglandin H synthase-1 (PGHS-1) by retrovirus-mediated gene transfer
 made it possible to quantify the kinetics of prostacyclin [prostaglandin
 (PG) I₂] synthesis and PGHS-1 turnover. Prostacyclin synthesis in
 response to arachidonate (AA) and ionophore A-23187 fit a single
 exponential kinetics. The rat consts. for AA- and ionophore-treated
cells were 0.064 min⁻¹ [**half-life** (t_{1/2}) of 11
 min] and 0.032 min⁻¹ (t_{1/2} = 22 min), resp. The rate const. of PGI₂
 synthesis from PGH₂ was 0.13 min⁻¹. Using kinetic **anal.** coupled
 with **computer** modeling, the PGHS-1 **half-life**
 was detd. to be 10.8 min. PGI₂ prodn. under successive treatments with AA
 or ionophore was reduced by only .apprx.30% after each treatment. The
 decline of PGI₂ synthesis corresponded to the redn. of PGHS-1 mass. The
half-life of PGI₂ synthesis from this **anal.**
 was at least an order of magnitude higher than that estd. from the
 single-dose expt. These findings indicate that .apprx.30% of PGHS-1 was
 degraded during each catalysis-induced auto-inactivation and that the
 extent and duration of PGI₂ synthesis are governed by the **level**
 of PGHS-1 mass.
 ST prostacyclin prostaglandin H synthase endothelium
 IT Kinetics, enzymic
 (kinetics of prostacyclin synthesis in endothelial **cells**
 overexpressing prostaglandin synthase-1)
 IT 59763-19-8, Prostaglandin H synthase
 RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation,
 nonpreparative)
 (1; kinetics of prostacyclin synthesis in endothelial **cells**
 overexpressing prostaglandin synthase-1)
 IT 363-24-6, PGE₂ 35121-78-9, Prostacyclin 42935-17-1, PGH₂ 58962-34-8
 RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation,
 nonpreparative)
 (kinetics of prostacyclin synthesis in endothelial **cells**
 overexpressing prostaglandin synthase-1)

L48 ANSWER 15 OF 24 CAPLUS COPYRIGHT 1999 ACS
 AN 1983:481999 CAPLUS
 DN 99:81999
 TI The pharmacokinetics of furazlocillin in healthy humans
 AU Hinderling, Peter H.; Gundert-Remy, Ursula; Foerster, Dietrich; Gau,
 Wolfgang
 CS Biozent., Univ. Basel, Basel, Switz.
 SO J. Pharmacokinet. Biopharm. (1983), 11(1), 5-30

DT Journal
 LA English
 CC 1-2 (Pharmacology)
 GI



AB The pharmacokinetics of furazlocillin (I) [66327-51-3] and its penicilloic acid deriv. [86683-42-3] were investigated in healthy volunteers after i.v. administration of 2 and 4 g dosages. Plasma protein binding (66%) and apparent red **cell**-plasma partition coeff. (0.055) of I were concn. independent. The pharmacokinetics of I were 1st order only at the lower dose **level**. The apparent **half lives** of 3 distinguishable phases were 4, 18, and 64 min. The total and renal clearances of I were, resp., 303 and 79 mL/min. The latter value implied tubular secretion of the drug. Graphical and digital **computer analyses** of the data were performed with a linear 3-compartment body model. Small but consistent deviations from linear kinetics caused by the nonrenal elimination route were obsd. after administration of the higher dose (4 g). In contrast, renal elimination showed no such dose dependency and was 1st order. The disposition kinetics of I were body-position independent. The penicilloic acid deriv. of I was found in the plasma and urine in all the subjects tested. The percentage of the dose excreted renally as the deriv. amounted, resp., to 5.2 and 7.0% after the lower and higher dosage of I, with significant inter- and intrasubject variability. The renal clearance of the deriv. was 41 mL/min.

ST furazlocillin pharmacokinetics

IT Process simulation, biological
 (of furazlocillin pharmacokinetics)

IT 86683-42-3

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
 (pharmacokinetics of, as furazlocillin metabolite in humans)

IT 66327-51-3

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
 (pharmacokinetics of, in humans)

L48 ANSWER 16 OF 24 CAPLUS COPYRIGHT 1999 ACS

AN 1980:492633 CAPLUS

DN 93:92633

TI Regulation of ribosomal ribonucleic acid **levels** in growing,
 3H-arrested, and crisis-phase WI-38 human diploid fibroblasts

AU Wolf, Stanley; Sameshima, Masazumi; Liebhaver, Steven A.; Schlessinger,
 David

CS Sch. Med., Washington Univ., St. Louis, MO, 63110, USA

SO Biochemistry (1980), 19(15), 3484-90

CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

CC 13-13 (Mammalian Biochemistry)

AB When the growth of WI-38 **cells** slowed in confluent cultures, the **levels** of RNA and protein per **cell** remained const. In contrast, when **cell** division was completely arrested by incubation of **cells** in serum factor-depleted medium, by 3H irradiation, or by repeated passage of **cells** into the nondividing senescent phase, the RNA and protein contents of each **cell** increased 1.5- to 3.5-fold and then stabilized. How the balance of synthesis and turnover could produce the higher **levels** of RNA was analyzed. The flow of Me label from methionine-methyl-3H into nascent 45 S pre-rRNA and rRNA and the turnover of methionine-methyl-3H- or uridine-5-3H-labeled cytoplasmic rRNA were measured. **Computer**-assisted modeling of data from gel electrophoretic separations of RNA (Wolf, S. F. et al., 1977) was used to quantitate rates of synthesis, processing, and nuclear turnover. In addition to the RNA species found in growing **cells**, phenol-detergent **extracts** from nongrowing **cells** contained a previously undetected, rapidly methyl-labeled fraction that was formed even in the presence of actinomycin D and was excluded from the **analyses**. The rates of initial labeling of 45 S pre-rRNA varied at most by 50% in growing and nongrowing **cells**. The rates of formation of 18 S and 28 S rRNA were very similar, and the **half-life** of cytoplasmic RNA was 3-4 days in all growth states. In senescent **cells**, quantitation showed that approximately 30% of the 18 S and 28 S rRNA was turned over in nuclear precursors, and no 32 S pre-rRNA was observed. In that case, wastage affected the accumulation of RNA and the processing pathway may be altered. In growing and 3H-arrested **cells**, however, no nuclear turnover of 18 S or 28 S rRNA sequences was detected, and all processing intermediates and **levels** were the same. Thus, the **level** of rRNA in diploid fibroblasts increases when division stops primarily because dilution of RNA into daughter **cells** ceases.

ST ribosomal RNA fibroblast **cell** division

IT Proteins

Ribonucleic acids, ribosomal

Ribonucleic acids

RL: BIOL (Biological study)

(of fibroblasts, **cell** division effect on)

IT **Cell** division

(ribosomal RNA of fibroblasts in)

IT Fibroblast

(ribosomal RNA of, **cell** division effect on)

L48 ANSWER 19 OF 24 CAPLUS COPYRIGHT 1999 ACS

AN 1978:19309 CAPLUS

DN 88:19309

TI Kinetic **analysis** of 25-hydroxyvitamin D3 metabolism in strontium-induced rickets in the chick

AU Omdahl, J. L.; Jelinek, G.; Eaton, R. P.

CS Dep. Biochem., Univ. New Mexico Sch. Med., Albuquerque, N. Mex., USA

SO J. Clin. Invest. (1977), 60(5), 1202-10

CODEN: JCINAO

DT Journal

LA English

CC 12-5 (Nonmammalian Biochemistry)

AB Kinetic data **anal.** was used to derive a 6-compartment

computer model which describes the in vivo 25-hydroxyvitamin D3

(I) metab. in control and Sr rachitic chicks. Plasma concns. of I (13

pmol/mL) and 24,25-dihydroxyvitamin D3 (0.9 pmol/mL) were 18 and 125%

greater than controls, resp., whereas the corresponding **level**

for 1.alpha.,25-dihydroxyvitamin D3 (0.3 pmol/mL) was only 30% of control.

Plasma disappearance of I was fitted using a 2-compartment model in which the metabolite extrapolated **half-life** was nearly twice

as large for Sr rachitic chicks (71 compared to 41 h). Intestinal

sequestration of 1.alpha.,25-dihydroxyvitamin D3 was assumed to be

irreversible and was fitted by a single exponential term in which

metabolite uptake rate and **tissue** concn. in Sr rickets was suppressed to 20 and 10% of control, resp. In contrast, uptake of I by the intestine occurred by a reversible process in which metabolite concn. was 45% greater in the Sr rachitic compared to the control group. The developed compartment model accepts time-dependent control or perturbed metabolite data for the plasma and(or) intestinal pools and provides quant. values for metabolite pool size, flux rate, and turnover time.

ST hydroxyvitamin D3 chicken rickets model; vitamin D3 chicken rickets model
IT Rickets
(hydroxyvitamin D3 metab. by chickens in, simulation of)

IT Chicken
(hydroxyvitamin D3 metab. by, in rickets, simulation of)

IT Intestine, metabolism
(hydroxyvitamin D3 transport by, of chickens in rickets)

IT Simulation model
(of hydroxyvitamin D3 metab., by chickens in rickets)

IT 19356-17-3 32222-06-3 40013-87-4
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(metab. of, by chickens in rickets, simulation of)

=> D QUE

L14 177978 SEA FILE=MEDLINE ABB=ON PLU=ON SOFTWARE# OR COMPUTER? OR
ARTIFICIAL INTELLIGENCE
L31 488192 SEA FILE=BIOSIS ABB=ON PLU=ON ?PROCESS?
L42 58294 SEA FILE=CAPLUS ABB=ON PLU=ON (HALF(1A)LI?) OR (TOLERANCE#(1A
)CONCENTRAT?)
L50 412299 SEA FILE=WPIDS ABB=ON PLU=ON (ANIMAL# OR TISSUE# OR CELL# OR
MUSCLE# OR ORGAN#)
L55 527980 SEA FILE=WPIDS ABB=ON PLU=ON L42 OR (RESIDUE# OR MRL OR
TOLERANC? OR LEVEL#)
L56 36822 SEA FILE=WPIDS ABB=ON PLU=ON L50 AND L55
L57 1366067 SEA FILE=WPIDS ABB=ON PLU=ON L14 OR L31
L58 7711 SEA FILE=WPIDS ABB=ON PLU=ON L56 AND L57
L59 620 SEA FILE=WPIDS ABB=ON PLU=ON (EDIBL? OR EAT? OR FOOD# OR
MEAT# OR LIVESTOCK OR POULTRY OR EGG#) AND L58
L66 17 SEA FILE=WPIDS ABB=ON PLU=ON (SOFTWARE? OR COMPUTER?) AND

=> D ALL 1-4

L68 ANSWER 1 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 98-077295 [07] WPIDS

DNN N98-061731 DNC C98-025948

TI Analysis of complex biological samples to e.g. diagnose disease, identify microorganisms, detect environmental toxins etc. - with array of sensor elements on solid support, then measuring increases in mass on the sensor surface and processing results by pattern recognition.

DC B04 C07 D13 D15 D16 J04 S03

IN DANIELSSON, B; MECKLENBURG, M; WINQVIST, F; WINQUIST, F

PA (BTBI-N) BT BIOMEDICAL TECHNOLOGY AB; (DANI-I) DANILSSON B; (MECK-I) MECKLENBURG M; (WINQ-I) WINQVIST F; (INTE-N) INTERACTIVA BIOTECHNOLOGIE GMBH

CYC 21

PI WO 9749989 A2 971231 (9807)* EN 29 pp G01N033-00

RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE

W: AU CA JP US

SE 9602545 A 971226 (9814) G01N033-543

AU 9734363 A 980114 (9822) G01N033-00

ADT WO 9749989 A2 WO 97-EP3317 970624; SE 9602545 A SE 96-2545 960625; AU 9734363 A AU 97-34363 970624

FDT AU 9734363 A Based on WO 9749989

PRAI SE 96-2545 960625

IC ICM G01N033-00; G01N033-543

ICS G06K009-00

AB WO 9749989 A UPAB: 980216

Complex biological samples are differentiated using an array of discrete sensor elements immobilised on a solid support, with constituents that bind to the array being determined directly from measuring the increase in mass on the sensor surface. Data are analysed using a neural network or statistics-based pattern recognition techniques.

A liquid sample is applied to the array, any unbound material removed, bound components measured from increase in mass and the data compared with a reference by pattern recognition software. The sensor elements contain antibodies, lectins, nucleic acid and/or carbohydrates, their genetically modified derivatives and gradients; also useful are non-biological materials such as cyclodextrins, roxane and/or template or imprinted polymers. The increase in surface mass is measured by quartz crystal microbalances, opto-acoustics, reflectometry, ellipsometry, standing acoustic waves or surface plasmon resonance, particularly in imaging mode using a CCD camera. For diagnosis suitable samples are blood, urine, milk, exhaled air, skin, serum, etc.

USE - The method is used: (i) to diagnose or monitor diseases (genetic, autoimmune, infectious, heart or lung diseases, cancer and drug abuse); (ii) to determine the general state of health (e.g. mild, common ailments with vague symptoms and exposure to low levels of toxins or radiation, such as high blood pressure, pregnancy, common colds, injuries, inflammatory reactions, mild immune suppressions, doping, altitude sickness, space sickness, chronic fatigue syndrome and effects of low level toxic chemical or radiation exposure, menstrual cycles and subclinical infections); (iii) to identify organisms (animal, fungus, virus, bacterium, plant or protozoa); (iv) to identify contamination by toxins in environmental samples (air, soil, water, rock, ice, plants, lichen, animals or foods); (v) after isolation of bound components, to

study diseases and develop drugs.

ADVANTAGE - The bound components do not have to be identified, so time and costs of assays are reduced. A large array identifies overall characteristics in complex samples, providing far more information than conventional quantification of a single material, and reducing the number of assays needed to provide a diagnosis. The selected elements have low specificity, so can detect subtle changes, giving an early indication of disease. Lectin-based sensors are more informative than immunoassays since carbohydrates are the greatest single source of diversity in biological systems and lectin structures are more variable than antibody structures.

Dwg.5/5

FS CPI EPI

FA AB; GI; DCN

MC CPI: B04-F01; C04-F01; B11-C08; C11-C08; B12-K04A; C12-K04A; D03-K03;

D03-K04; D04-A01H; D05-H04; D05-H05; D05-H06; D05-H09; D05-H10;

J04-B01

EPI: S03-E14

L68 ANSWER 2 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 92-285321 [35] WPIDS

DNN N92-218346 DNC C92-126946

TI Determn. of fat content of biological tissues - using computer to compare pressure and temp. measurement of meat mincer with known characteristics of meat samples.

DC B04 D12 J04 P41

IN EFFLER, R; KNIPPEL, G; SIELAFF, H; THIEMIG, F; ZIEGS, E

PA (SCHL-N) SCHLACHT & VERARBEITUNGSKOMBINAT; (UYBE) UNIV BERLIN HUMBOLDT

CYC 1

PI DD 299204 A5 920402 (9235)* 3 pp G01N033-12

ADT DD 299204 A5 DD 90-340535 900510

PRAI DD 90-340535 900510

IC ICM G01N033-12

ICS B02C018-30; B02C025-00

AB DD 299204 A UPAB: 931113

In a new device for computer-aided determn. of the fat content of biological tissues, a temp. probe (13) and pressure sensors (11,12) are arranged on the inner surface of the housing of a normal meat mincer, and are linked to the computer. Temp. probe and one pressure sensor (11) are located in the general region of the last turn of the pressure screw (3) of the mincer. Second pressure sensor (12) is located in the cutting region (1) of the mincer at the level of the last knife (7), or in the outlet perforated plate (8).

Pressure and temp. measurements are pref. compared by the computer (14) with the known characteristic curves of various test samples. Fat content of the tissue or meat can therefore be deduced and output directly by the computer.

USE/ADVANTAGE - For rapidly determining the fat content of biological tissues, esp. meat and meat prods. Allows the measurement to be made during the mincing process, and allows adjustments to the prodn. process w.r.t. the desired prod. compsn. to be made as the process is in progress.

1/1

Dwg.1/1

FS CPI GMPI

FA AB; GI

MC CPI: B04-B01B; B04-B04A3; B11-C08; B12-K04A; D02-A01; D03-K04; D05-H09;

J04-C04

L68 ANSWER 3 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 86-346650 [52] WPIDS

DNN N86-258686

TI Dietetic measurement with food weighing and nutrition computing - has keyboard and memory inputs to integral computer calculating nutrient level of amount and type of food on eight scale.

DC S02 X27

IN ATTIKOUZEL, X
PA (ATTI-I) ATTIKIOUZEL Y; (SENT-N) SENTRON LTD
CYC 18

PI WO 8607447 A 861218 (8652)* EN 21 pp
RW: AT BE CH DE FI GB IT LU NL SE
W: AU DK FR GB JP NO US
AU 8659695 A 870107 (8711)
NO 8700467 A 870413 (8721)
EP 224509 A 870610 (8723) EN
R: AT BE CH DE FR GB IT LI LU NL SE
FI 8700503 A 870206 (8744)
DK 8700612 A 870206 (8748)
JP 63500266 W 880128 (8810)
ZA 8604240 A 871207 (8812)
US 4911256 A 900327 (9018)

ADT WO 8607447 A WO 86-AU166 860606; EP 224509 A EP 86-903162 860606; JP 63500266 W JP 86-503272 860606; US 4911256 A US 87-23863 870202

PRAI AU 85-951 850607; AU 86-59695 850606
REP AU 8317256; JP 55136914; JP 57060223; DE 3338430; EP 196277; SSR880803
IC G01F000-00; G01G019-41; G01G023-22; G06F015-42
AB WO 8607447 A UPAB: 930922

The appts. includes a horizontal scale tray supported by a load cell having tare deduction features. The shallow sloping front comprises a multi-function keyboard of the sensitive type. The key-board includes alphabetic keys, command keys, and nutrient level keys. A visual display is sealed behind the transparent panel.

The apparatus is characterized by having weighing and computing facilities, with the latter comprising a central processing unit to which is connected a memory. The memory contains data corresponding to food items and their nutrient levels, together with programmed instruction for the CPU to correlate the logical periodic signals from the weighing facility with data for food items registered through the keyboard input.

USE - Determining weight and quantities of nutrient in food items as part of dietary planning and control.

0/3

FS EPI
FA AB
MC EPI: S02-D02X; X27-A02

L68 ANSWER 4 OF 4 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD

AN 86-326792 [50] WPIDS

DNN N86-247851 DNC C86-144086

TI Pigs carcass quality grading - by automatic scales and fat meat ratio meter feeding a microcomputer.

DC D12 P43 S02

IN ARNOLD, H U; HARTEL, N; LICHTERS, G

PA (LIEB-I) LIEBE R; (TEHO-N) TECH HOCH LLMENAU; (SUDT-N) VEB SUDTHURINGER FL

CYC 4

PI DE 3619349 A 861204 (8650)* 14 pp
DE 3619349 C 880310 (8810)
DD 256997 A 880601 (8842)
HU 45859 T 880928 (8843)
CS 8604163 A 890814 (8941)

ADT DE 3619349 A DE 86-3619349 860609

PRAI DD 85-278311 850705

IC A22B005-00; B07C005-10; G01B009-00; G01B021-02; G01N033-12

AB DE 3619349 A UPAB: 930922

Animal carcasses, specially pigs split in two halves, are classified by quality grade in abattoirs by a weighing machine with a digital output fed to a microcomputer. A manual instrument is guided along a straight edge to measure the relative lengths of the meat and fat bacon sections at a defined level of the hind limb. The computer calculates the grade and registers the result on a display and a printer, it also operates a marker for the carcass.

ADVANTAGE - This assists the work of classification and replaces the subjective judgement by an objective assessment.

0/3

FS CPI EPI GMPI

FA AB

MC CPI: D02-A01

EPI: S02-A09